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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/641,355	08/14/2003	Stephen N. Vaughn	2000B028-2	1181

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EXAMINER	
DANG, THUAN D	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/641,355	VAUGHN ET AL.	
	Examiner	Art Unit	
	Thuan D. Dang	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20,22 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18, 20, 22-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-18, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daviduk et al (4,238,631) in view of Kuechler et al (6,245,703).

Daviduk discloses a process comprising contacting oxygenates with a molecular sieve catalyst to produce olefins. The catalyst is then stripped with steam without regeneration (the abstract; the figure; col. 2, lines 5-16; col. 3, lines 33-35; col. 9, lines 55-65).

The condition of the reaction can be found on column 9, lines 44-48.

Daviduk does not disclose using a silicoaluminophosphate catalyst as called for in claims 1 and 14-16 (see the entire patent for details). However, such a catalyst discussed by Kuechler is used for converting oxygenated to olefins (col. 3, lines 11-18; col. 4, lines 11-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Daviduk process by using the Kuechler catalyst to arrive at the applicants' claimed process since Kuechler discloses ZSM-5 and SAPO are suitable for converting oxygenates to olefins.

Daviduk does not disclose the ratio of the exposing time and the stripping time of the catalyst, the stripping gas flow rate and the percentage of hydrocarbon removed from the catalyst during the stripping step, and polymerization of the olefin product.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Daviduk by selecting appropriate amount of removed hydrocarbons on the catalyst, appropriate flow rates of the stripping gas, and appropriate amounts of time for exposing and stripping of the catalyst these parameters depend on the activity of the catalyst and how much the catalyst is covered by impurities. Further, in the absence of unexpected results, selecting these parameters for the Daviduk is obvious.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Daviduk process by polymerizing olefins to produce more valuable product, namely polymer.

Claims 1-18, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al (4,071,573) in view of Kuechler et al (6,245,703).

Owen discloses a process of converting a feed of alcohol, such as methanol to olefin (col. 10, lines 12-18). Owen discloses a step wherein a portion of the catalyst is stripped and recycled to the reaction zone without regeneration (col. 11, lines 60-65). On column 11, lines 63-68, Owen disclose a portion of the stripped catalyst is regenerated. On column 6, lines 45-50, the temperature of the process is disclosed.

Owen does not disclose using a catalyst as called for in claims 14-16 (see the entire patent for details). However, such a catalyst discussed by Kuechler is used for converting oxygenated to olefins (col. 3, lines 11-18; col. 4, lines 11-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Owen process by using the Kuechler catalyst to arrive at the applicants' claimed process since Kuechler discloses ZSM-5 and SAPO are suitable for converting oxygenates to olefins.

Owen does not disclose the ratio of the exposing time and the stripping time of the catalyst, the stripping gas flow rate and the percentage of hydrocarbon removed from the catalyst during the stripping step, and polymerization of the olefin product.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Owen process by selecting appropriate amount of removed hydrocarbon on the catalyst, appropriate flow rates of the stripping gas, and appropriate amounts of time for exposing and stripping of the catalyst these parameters depend on the activity of the catalyst and how much the catalyst is covered by impurities. Further, in the absence of unexpected results, selecting these parameters for the Owen is obvious.

Response to Arguments

Applicant's arguments filed 12/9/04 have been fully considered but they are not persuasive.

The argument that none of references discloses various aspects of applicants' claimed invention such as ratio of exposing time, stripping time of the catalyst, stripping gas flow rate, percentage of hydrocarbon removed from the catalyst during stripping and an polymerization of olefin is admitted by the examiner in the previous Office action and the above rejection. However, the position of the examiner is that selecting appropriate amount of removed hydrocarbon on the catalyst, appropriate flow rates of the stripping gas, and appropriate amounts of time for exposing and stripping of the catalyst these parameters depend on the activity of the catalyst and how much the catalyst is covered by impurities. As discussed in the previous Office action, it is clear that applicants cannot show any criticality for selecting these parameters. Therefore, in the absence of unexpected results, selecting these parameters for the Owen or Daviduk process is obvious.

The argument that applicants' invention is a method of making olefin product which is considerably different from the gasoline type product produced by either Daviduk and Owen is not correct since both Daviduk and Owen process of conversion oxygenate has an olefinic product (review the rejection).

The argument that the use of Kuechler catalyst would destroy the Owen or Daviduk process which produce a product different from Kuechler is not persuasive since either Kuechler or Owen or Daviduk produce olefin as discussed above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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